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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,734	04/26/2001	Zhiyi Yu	JG00143	8306

23330 7590 12/09/2002

MOTOROLA, INC.  
CORPORATE LAW DEPARTMENT - #56-238  
3102 NORTH 56TH STREET  
PHOENIX, AZ 85018

EXAMINER

HU, SHOUXIANG

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 12/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/842,734

Applicant(s)

YU ET AL.

Examiner

Shouxiang Hu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 39-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1-38 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restriction*

1. Claims 39-54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 4.
2. Applicant's election with traverse of claims 1-38 in Paper No. 4 is acknowledged. The traversal is on the ground(s) that: (a) there is no explanation as to why the given alternative process is materially different to the claimed process; and (b) there is no demonstrable burden placed on the Office because only a few subclasses need to be searched. This is not found persuasive as explained below.

The claimed invention of Group I involves the subject matter of a structure comprising a monocrystalline material layer on a binary metal oxide layer. Such a structure can be formed alternatively by forming the monocrystalline material layer through bonding on the binary metal oxide layer, instead of through epitaxial growth as defined in the Group II invention. Accordingly, the given alternative process is materially different to the claimed process in Group II, as it is not readable on the claimed process in Group II.

In addition, although only two subclasses were shown in the Restriction requirement in the previous Office Action, these are only the two representative ones. And, more and different subclasses and key word searches are required for each of the

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inventions of Group 1 and Group II, such as subclasses of 257/190, 192, 200, 189, 12, 20, 24, which are necessary for Group I, and 438/483, 478, 481, 46, 47, 27, and 94, which are necessary for Group II.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and substantial burden would be imposed on the Examiner if both of the inventions had to be searched and examined, thus restriction for examination purposes as indicated is proper.

The requirement in the previous Office action is still deemed proper and is therefore made FINAL.

3. Accordingly, claims 1-54 are pending in this application; and claims 1-38 remain active in this Office action.

***Further Election/Restriction***

4. This application contains claims 1-38 further directed to the following patentably distinct species of the claimed invention:

Species 1, embodiment of Fig. 1 with a template layer shown in Fig. 5, involving a buffer layer formed of a crystalline binary metal oxide layer on an amorphous layer, in combination with a surfactant/capping template layer.

Species 2, embodiment of Fig. 1 with a template layer shown in Fig. 6, involving a buffer layer formed of a crystalline binary metal oxide layer on an amorphous layer, in combination with a Zintl-phase template layer.

Species 3, embodiment of Fig. 2 with a template layer shown in Fig. 5, involving a buffer layer formed of an entirely amorphous layer, in combination with a surfactant/capping template layer.

Species 4, embodiment of Fig. 2 with a template layer shown in Fig. 6, involving a buffer layer formed of an entirely amorphous layer, in combination with a Zintl-phase template layer.

Species 5, embodiment of Fig. 3 with a template layer shown in Fig. 5, involving a buffer layer formed of a stained binary metal oxide stack on an amorphous layer, in combination with a surfactant/capping template layer.

Species 6, embodiment of Fig. 3 with a template layer shown in Fig. 6, involving a buffer layer formed of a stained binary metal oxide stack on an amorphous layer, in combination with a Zintl-phase template layer.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least claim 1 is generic.

**Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An**

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argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is (703) 306-5729. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SH  
December 7, 2002

  
Shouxiang Hu  
Patent Examiner  
TC2800